

APPENDIX D

IRT ITEM PARAMETERS FOR MCAS 2008 TESTS

All of the tables in Appendix D use the following abbreviations in column headings:

- Item** = the internal reference number for each item
- Type** = the type of item:
 - MC** = multiple-choice
 - OR** = open-response
 - SA** = short-answer
 - E-CON** = Standard English Conventions (ELA Composition)
 - E-DEV** = Topic Development (ELA Composition)
- A** = discrimination **C** = pseudo-guessing parameter
- B** = difficulty **D** = step parameters

For additional information about IRT item parameters, refer to section 4.3 of this document.

English Language Arts/Reading: Tables D1–D7Appendix D, Pages 1–7

Mathematics: Tables D8–D14Appendix D, Pages 8–14

Science and Technology/Engineering: Tables D15–D20 Appendix D, Page 15–20

English Language Arts/Reading
Table D1: MCAS 2008 Reading, Grade 3

Item	Type	A	B	C	D1	D2	D3	D4
258823	MC	1.094	0.060	0.313				
258837	MC	0.822	-0.682	0.370				
258825	MC	1.213	-1.043	0.299				
258829	MC	0.950	-0.811	0.233				
258830	MC	1.278	-1.435	0.300				
258835	MC	1.033	-1.111	0.378				
258839	MC	1.097	-1.005	0.252				
258844	MC	0.887	-0.339	0.471				
257047	MC	1.279	-0.563	0.254				
257050	MC	1.117	-1.701	0.171				
257057	MC	0.918	-0.355	0.234				
257059	MC	0.909	-1.719	0.374				
257142	MC	0.476	-1.900	0.000				
257144	MC	0.882	-1.850	0.155				
272966	MC	0.702	-0.939	0.198				
257150	MC	0.495	-0.014	0.278				
257151	MC	0.850	-0.441	0.281				
257153	MC	0.922	-1.965	0.302				
260462	MC	0.905	-1.725	0.184				
276585	MC	0.783	-0.759	0.337				
258406	MC	0.809	-0.504	0.193				
258403	MC	0.865	-0.735	0.319				
258409	MC	0.855	-0.595	0.355				
258411	MC	0.697	-1.898	0.193				
259154	MC	0.795	-2.146	0.361				
259160	MC	0.776	-2.285	0.378				
259163	MC	0.730	-1.714	0.220				
259166	MC	0.812	-1.723	0.229				
259167	MC	1.056	-1.410	0.197				
259172	MC	0.883	-1.659	0.554				
259177	MC	1.066	-1.656	0.227				
259185	MC	0.904	-0.428	0.258				
256993	MC	0.853	-2.050	0.287				
256994	MC	1.209	-1.002	0.120				
256997	MC	0.996	-0.402	0.241				
257000	MC	0.806	-0.214	0.351				
258869	MC	0.661	-0.312	0.107				
258880	MC	0.781	0.030	0.262				
261681	MC	1.256	-0.106	0.214				
258885	MC	0.811	-1.118	0.284				
257178	OR	0.491	0.759		5.381	0.917	-1.864	-4.434
259188	OR	0.437	-0.134		4.791	0.932	-1.539	-4.184

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Table D2: MCAS 2008 English Language Arts, Grade 4

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
255217	MC	0.885	-1.379	0.323										
255218	MC	0.440	-1.877	0.000										
255223	MC	0.903	-0.610	0.198										
255233	MC	0.859	-1.190	0.245										
255237	MC	0.391	-1.874	0.000										
255251	MC	0.954	-1.314	0.224										
255256	MC	0.670	-1.618	0.087										
256234	MC	0.358	-3.513	0.000										
256239	MC	0.741	-1.487	0.221										
256247	MC	0.604	-1.274	0.267										
256251	MC	0.668	-0.370	0.248										
255654	MC	0.636	-1.718	0.000										
255665	MC	1.172	-1.074	0.192										
255661	MC	0.498	-1.509	0.000										
272967	MC	0.657	-0.907	0.178										
255135	MC	0.558	-2.446	0.206										
255137	MC	0.782	-1.997	0.109										
255175	MC	0.440	-1.690	0.000										
255177	MC	0.806	-1.258	0.257										
255185	MC	0.638	-1.309	0.103										
255193	MC	0.496	-1.891	0.000										
255194	MC	0.921	-1.213	0.154										
255197	MC	0.753	-1.580	0.189										
255026	MC	0.755	-0.592	0.238										
255030	MC	0.707	-0.664	0.170										
255449	MC	1.006	-1.290	0.250										
255452	MC	0.889	-0.949	0.216										
255459	MC	0.766	-1.045	0.180										
255471	MC	0.861	-1.167	0.154										
255479	MC	1.136	-1.380	0.186										
255484	MC	0.530	-2.037	0.000										
260343	MC	0.894	-1.819	0.114										
260345	MC	0.695	-1.985	0.180										
260347	MC	0.821	-1.096	0.136										
260358	MC	0.711	-1.424	0.077										
260367	MC	0.814	-1.463	0.117										
255263	OR	0.946	0.187		2.743	0.912	-0.987	-2.667						
255674	OR	0.956	0.205		2.174	0.838	-0.709	-2.304						
255203	OR	0.869	0.103		2.814	0.866	-0.955	-2.724						
255525	OR	0.779	-0.471		3.443	0.970	-1.219	-3.194						
2615595	E-CON	0.951	-2.060		2.246	1.705	0.286	-0.325	-1.587	-2.326				
2615595	T-DEV	0.903	-0.048		4.274	3.790	2.429	1.855	0.587	0.082	1.577	2.396	3.946	4.934

Table D3: MCAS 2008 English Language Arts, Grade 5

Item	Type	A	B	C	D1	D2	D3	D4
259035	MC	0.86731	-0.89772	0.26831				
259038	MC	0.71927	-1.00414	0.41822				
264343	MC	0.59438	-1.19642	0.25979				
259042	MC	0.99894	-0.90429	0.20395				
259045	MC	0.73022	-0.60914	0.26087				
259047	MC	0.9023	-0.47298	0.25123				
259049	MC	0.89782	-1.63945	0.27771				
223570	MC	0.72827	-0.62185	0.16834				
223575	MC	0.78779	-0.80096	0.19036				
223579	MC	0.45978	-1.5445	0				
223576	MC	0.86055	-0.93693	0.27433				
257939	MC	0.9182	-0.89849	0.32361				
257940	MC	1.01921	-0.61558	0.24421				
257943	MC	0.89174	-0.0041	0.236				
257945	MC	1.32688	-0.34884	0.1659				
257951	MC	0.44054	-2.97285	0				
257968	MC	0.38252	-2.95303	0.13722				
257970	MC	0.74204	-0.76382	0.41361				
257973	MC	0.73737	-0.30879	0.24411				
257983	MC	0.83951	-0.42189	0.17298				
257976	MC	0.53922	-0.60046	0.31649				
257981	MC	0.61499	-1.50895	0.12826				
257982	MC	0.90308	-0.56689	0.21636				
257985	MC	0.76192	-1.17558	0.24623				
258076	MC	0.71024	-1.08138	0.1403				
258068	MC	0.75811	-1.07758	0.15956				
258074	MC	0.86945	-1.61835	0.18547				
258080	MC	0.65502	-1.07061	0.13079				
258079	MC	0.82238	-2.05062	0.19681				
258085	MC	0.73766	-2.16758	0.1554				
258089	MC	1.05298	-1.19592	0.25885				
259182	MC	0.60284	-1.42797	0.14014				
259220	MC	0.5197	-1.21842	0.12804				
259203	MC	0.66752	-1.91975	0				
259212	MC	0.95684	-1.93021	0.10696				
259214	MC	0.98922	-0.63552	0.20601				
259053	OR	0.700	-0.192		3.270	1.088	-1.184	-3.174
257956	OR	0.870	0.117		2.800	0.720	-1.002	-2.518
257986	OR	0.852	-0.099		3.077	1.060	-1.113	-3.023
258105	OR	0.460	-0.535		4.708	1.202	-1.734	-4.176

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Table D4: MCAS 2008 English Language Arts, Grade 6

Item	Type	A	B	C	D1	D2	D3	D4
259380	MC	0.732	-0.849	0.220				
259384	MC	0.595	-1.705	0.206				
259385	MC	1.160	-1.743	0.386				
264577	MC	0.898	-0.914	0.259				
264575	MC	0.963	-0.657	0.279				
259400	MC	0.645	-1.170	0.258				
259427	MC	1.121	-0.613	0.291				
229072	MC	0.478	-1.807	0.000				
229081	MC	1.135	-0.594	0.257				
229084	MC	1.131	-1.022	0.342				
229106	MC	0.800	-0.858	0.279				
229115	MC	0.775	-0.750	0.167				
257428	MC	0.621	-0.113	0.307				
257430	MC	0.625	-1.186	0.128				
257434	MC	0.820	-0.730	0.213				
257435	MC	0.732	-0.819	0.142				
203244	MC	0.646	0.907	0.126				
203260	MC	0.837	-0.877	0.243				
203273	MC	0.509	-1.260	0.140				
203276	MC	0.542	-1.076	0.193				
203281	MC	0.345	-2.641	0.000				
203289	MC	0.507	-1.449	0.000				
203243	MC	0.803	-0.525	0.242				
273453	MC	0.613	-1.024	0.115				
257857	MC	0.429	-2.477	0.000				
257858	MC	0.474	-1.947	0.000				
257880	MC	0.384	-0.487	0.277				
257875	MC	1.031	-1.108	0.327				
257865	MC	0.618	-0.239	0.259				
257876	MC	0.494	-1.565	0.000				
257891	MC	0.702	-1.431	0.179				
257841	MC	0.812	-0.807	0.206				
257829	MC	1.046	-1.512	0.257				
257831	MC	1.005	-0.628	0.240				
257840	MC	0.972	-0.705	0.259				
257842	MC	1.293	-0.773	0.243				
259437	OR	0.746	-0.968		3.342	1.284	-1.366	-3.261
257440	OR	0.767	-0.261		3.337	1.067	-1.339	-3.064
203292	OR	0.639	0.403		3.762	1.007	-1.386	-3.383
257897	OR	0.689	-0.400		3.206	0.833	-1.160	-2.879

Table D5: MCAS 2008 English Language Arts, Grade 7

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
254995	MC	1.070	-1.307	0.281										
254997	MC	0.712	-2.364	0.088										
254999	MC	0.846	-2.328	0.226										
255001	MC	0.403	-0.775	0.144										
255008	MC	1.013	-0.913	0.148										
255014	MC	0.849	-2.602	0.089										
255015	MC	0.919	-1.213	0.277										
259433	MC	0.654	-2.251	0.117										
259307	MC	0.791	-2.342	0.119										
259452	MC	0.518	-0.656	0.145										
273560	MC	0.959	-1.462	0.143										
260610	MC	1.001	-0.677	0.194										
260618	MC	0.645	-0.891	0.169										
260623	MC	0.953	-0.476	0.182										
260616	MC	0.945	-0.752	0.215										
224389	MC	0.513	-1.808	0.000										
224395	MC	0.735	-1.024	0.190										
224400	MC	0.946	-0.702	0.197										
224404	MC	0.827	-1.748	0.137										
224407	MC	0.511	-0.962	0.168										
224463	MC	0.569	-2.379	0.000										
224406	MC	0.889	-2.325	0.144										
224411	MC	0.511	-0.788	0.077										
222354	MC	0.413	-1.303	0.000										
222356	MC	0.701	-0.267	0.175										
222357	MC	1.123	-1.347	0.291										
222380	MC	0.904	-0.766	0.257										
222394	MC	0.776	-0.732	0.121										
222401	MC	0.405	-1.935	0.000										
222415	MC	0.759	-1.555	0.282										
222409	MC	1.267	-1.707	0.371										
256441	MC	0.748	-1.914	0.000										
256448	MC	0.467	-1.273	0.089										
256457	MC	1.262	-0.795	0.198										
256460	MC	0.978	-1.240	0.194										
256470	MC	1.064	-0.758	0.127										
223333	OR	1.018	-0.405		2.549	0.761	-0.921	-2.389						
265210	OR	1.014	-0.789		2.037	0.830	-0.624	-2.243						
223422	OR	1.201	-0.160		1.871	0.520	-0.601	-1.791						
259564	OR	0.959	-0.114		2.489	1.132	-1.093	-2.528						
2616695	E-CON	0.999	-2.125		2.390	1.805	0.433	-0.244	-1.782	-2.603				
2616695	T-DEV	0.956	-0.248		4.272	3.752	2.486	1.911	0.281	-0.405	-1.742	-2.504	-3.548	-4.503

Appendix D

Table D6: MCAS 2008 English Language Arts, Grade 8

Item	Type	A	B	C	D1	D2	D3	D4
234525	MC	1.007	-1.102	0.226				
234527	MC	0.352	-2.003	0.000				
234548	MC	0.974	-1.646	0.258				
234549	MC	0.427	-2.696	0.000				
234556	MC	0.316	-2.340	0.000				
234559	MC	0.835	-1.568	0.243				
234531	MC	0.472	-2.586	0.000				
256723	MC	0.574	-1.536	0.151				
257859	MC	0.724	-1.416	0.186				
257863	MC	0.816	-1.563	0.227				
257868	MC	1.009	-1.727	0.125				
257866	MC	0.812	0.100	0.187				
259679	MC	0.756	-1.866	0.117				
259689	MC	0.677	-0.792	0.115				
259690	MC	0.807	-1.577	0.214				
259694	MC	0.643	-1.721	0.000				
259696	MC	1.049	-1.323	0.217				
260531	MC	0.897	-1.535	0.178				
259454	MC	0.682	-1.227	0.233				
259476	MC	0.979	0.198	0.263				
260537	MC	0.591	-1.037	0.060				
259479	MC	0.806	-0.233	0.208				
260539	MC	1.022	-0.939	0.240				
259481	MC	0.550	-0.959	0.224				
259482	MC	0.738	-0.268	0.295				
257753	MC	0.873	-2.160	0.269				
257756	MC	1.255	-0.773	0.304				
257757	MC	0.930	-1.603	0.243				
257758	MC	0.708	-0.818	0.183				
257760	MC	1.400	-0.246	0.191				
257764	MC	0.873	-0.344	0.196				
257766	MC	1.170	-1.178	0.288				
257465	MC	0.858	-0.520	0.247				
257466	MC	0.831	-1.085	0.288				
257470	MC	0.958	-0.494	0.208				
257475	MC	0.858	-0.269	0.259				
234563	OR	0.912	-0.951		2.583	0.896	-0.943	-2.536
259698	OR	0.979	-0.754		2.521	0.750	-0.927	-2.345
259486	OR	0.852	-0.185		2.604	0.816	-0.895	-2.524
257775	OR	1.109	-0.562		2.138	0.628	-0.758	-2.008

Table D7: MCAS 2008 English Language Arts, Grade 10

Item	Type	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
228352	MC	0.976	-0.732	0.291										
228521	MC	1.461	-0.487	0.247										
228361	MC	1.227	-1.250	0.198										
228364	MC	1.069	-0.200	0.171										
228541	MC	0.790	-1.383	0.228										
228546	MC	0.999	0.215	0.203										
228370	MC	1.482	0.003	0.205										
259417	MC	0.707	-1.063	0.213										
259413	MC	0.798	0.442	0.343										
259429	MC	0.909	0.307	0.158										
259446	MC	1.030	0.784	0.116										
259453	MC	1.127	-0.031	0.275										
259335	MC	1.040	0.066	0.273										
259332	MC	1.310	0.004	0.313										
259344	MC	1.184	0.319	0.242										
259354	MC	0.904	0.142	0.121										
257708	MC	1.053	-0.291	0.175										
257715	MC	1.327	-0.206	0.233										
257717	MC	1.034	0.271	0.200										
257719	MC	1.289	0.203	0.216										
257720	MC	0.914	0.596	0.172										
257722	MC	1.413	0.008	0.164										
257723	MC	1.470	0.067	0.271										
257730	MC	1.279	0.882	0.207										
254499	MC	1.296	0.018	0.250										
254502	MC	1.679	1.088	0.131										
254504	MC	1.006	0.180	0.141										
254510	MC	1.096	0.357	0.301										
254508	MC	1.117	0.363	0.159										
254500	MC	1.137	0.491	0.317										
254511	MC	0.770	-0.073	0.221										
259240	MC	0.904	0.716	0.195										
259242	MC	1.589	-0.466	0.382										
259254	MC	0.903	0.160	0.271										
259258	MC	0.677	0.402	0.229										
259264	MC	0.833	0.072	0.252										
228557	OR	1.262	0.287		1.674	0.485	-0.584	-1.575						
259367	OR	1.338	0.684		1.417	0.699	-0.504	-1.611						
257731	OR	1.404	0.318		1.473	0.797	-0.594	-1.677						
254514	OR	1.253	0.481		1.751	0.755	-0.702	-1.803						
2645555	E-CON	1.768	-1.074		1.533	1.224	0.223	-0.116	-1.197	-1.667				
2645555	T-DEV	1.577	0.340		2.895	2.645	1.826	1.506	0.288	-0.169	-1.280	-1.777	-2.762	-3.173

Appendix D

Mathematics

Table D8: MCAS 2008 Mathematics, Grade 3

Item	Type	A	B	C	D1	D2
218477	MC	0.957	-1.066	0.382		
218427	MC	0.891	-0.581	0.312		
218511	MC	1.069	-1.516	0.145		
218449	MC	0.861	-0.669	0.234		
227255	MC	1.106	-0.077	0.515		
206975	MC	0.825	-0.615	0.076		
218323	MC	0.903	-0.697	0.409		
218546	MC	1.069	-0.812	0.125		
227262	MC	0.929	-0.572	0.345		
218474	MC	0.789	-0.607	0.149		
218433	MC	0.395	-1.067	0.248		
273313	MC	0.835	-1.753	0.088		
207171	MC	0.751	-2.157	0.031		
227256	MC	0.853	-1.651	0.220		
218472	MC	0.871	-0.310	0.169		
227131	MC	1.054	-1.426	0.453		
218314	MC	0.543	-1.842	0.000		
264188	MC	0.850	-0.946	0.263		
203473	MC	0.870	-1.291	0.036		
218456	MC	0.872	-0.426	0.358		
218336	MC	0.798	-1.219	0.285		
264637	MC	1.072	0.346	0.051		
207006	MC	0.895	-1.338	0.049		
207700	MC	1.016	-1.854	0.058		
206996	MC	0.802	-2.007	0.032		
207881	SA	0.347	-2.087			
198175	SA	0.483	-1.604			
203693	SA	0.781	-1.757			
218297	SA	0.887	-0.437			
218280	SA	1.029	-0.034			
241028	OR	0.836	-0.864		0.596	-0.596
207998	OR	0.587	0.251		1.653	-1.653
218577	OR	0.736	-0.603		0.850	-0.850
227182	OR	0.649	0.328		0.828	-0.828
227277	OR	0.800	-0.326		0.492	-0.492

Table D9: MCAS 2008 Mathematics, Grade 4

Item	Type	A	B	C	D1	D2	D3	D4
228590	MC	1.020	-1.881	0.206				
227459	MC	0.919	-1.490	0.203				
227363	MC	1.012	-1.523	0.176				
227388	MC	0.724	-2.185	0.058				
227464	MC	0.760	-1.415	0.117				
227510	MC	0.667	-2.599	0.045				
218935	MC	0.735	0.783	0.274				
229061	MC	0.966	-0.679	0.239				
227592	MC	1.078	0.082	0.516				
218881	MC	0.761	-0.008	0.182				
218884	MC	1.005	-0.562	0.335				
219003	MC	0.634	0.993	0.278				
250435	MC	0.566	-2.252	0.089				
228799	MC	0.567	-1.065	0.143				
247703	MC	0.597	-1.078	0.246				
247536	MC	0.610	-2.157	0.152				
273868	MC	1.208	0.177	0.152				
247759	MC	0.899	0.034	0.113				
247586	MC	1.042	-1.023	0.163				
222172	MC	0.689	-1.181	0.146				
250317	MC	0.550	-1.048	0.215				
218917	MC	1.078	-1.293	0.176				
273874	MC	0.769	-1.741	0.126				
247595	MC	0.997	-0.455	0.174				
250360	MC	0.958	-0.001	0.056				
218912	MC	1.150	-0.617	0.163				
247561	MC	1.102	-0.267	0.173				
273875	MC	0.925	-1.256	0.090				
247623	MC	0.844	-0.573	0.273				
227603	SA	0.819	-1.414					
247633	SA	0.825	0.961					
219076	SA	0.684	-0.714					
219075	SA	0.615	-0.412					
219065	SA	0.910	1.295					
250869	OR	0.880	-0.358		1.352	0.282	-0.270	-1.365
250554	OR	0.887	0.594		2.093	0.153	-0.896	-1.351
250841	OR	0.781	0.457		3.443	0.823	-1.103	-3.162
250388	OR	1.005	-0.141		0.967	0.209	-0.134	-1.042
219127	OR	0.583	0.121		1.854	0.590	-0.356	-2.088

Appendix D

Table D10: MCAS 2008 Mathematics, Grade 5

Item	Type	A	B	C	D1	D2	D3	D4
248732	MC	0.685	0.012	-2.259				
249062	MC	0.937	0.015	-1.100				
248906	MC	0.531	0.016	-2.169				
248991	MC	0.929	0.015	-1.349				
249052	MC	0.959	0.012	-0.741				
217306	MC	0.818	0.013	-0.435				
249069	MC	0.894	0.012	-0.755				
248913	MC	1.164	0.015	0.458				
249095	MC	0.667	0.011	-1.231				
248868	MC	0.699	0.012	-0.812				
249084	MC	1.260	0.015	0.128				
249001	MC	0.732	0.013	-0.509				
249065	MC	1.139	0.018	-1.335				
248994	MC	1.207	0.019	-1.030				
248997	MC	0.721	0.013	-1.318				
248897	MC	1.457	0.016	-0.296				
248888	MC	0.648	0.014	0.123				
265309	MC	0.885	0.013	0.035				
248999	MC	1.290	0.015	-0.085				
249071	MC	1.161	0.015	-0.131				
249101	MC	1.016	0.014	-0.467				
248894	MC	0.782	0.018	0.425				
248721	MC	0.676	0.012	0.595				
273268	MC	1.071	0.013	0.466				
248866	MC	1.292	0.017	-0.226				
248927	MC	1.367	0.017	0.077				
249073	MC	0.681	0.011	-0.578				
249066	MC	0.983	0.012	-0.526				
248899	MC	1.329	0.019	0.190				
222201	SA	0.735	-0.724					
249004	SA	0.667	-0.850					
249002	SA	0.599	-1.539					
249119	SA	0.729	-1.606					
248881	SA	0.901	0.160					
249089	OR	0.898	-0.273		1.209	0.132	-0.211	-1.130
248910	OR	0.923	-0.957		1.838	0.679	-0.599	-1.917
249050	OR	0.737	-0.001		2.246	0.680	-0.597	-2.329
248883	OR	0.912	0.551		1.531	0.247	-0.012	-1.766
249006	OR	1.156	-0.038		0.862	0.506	-0.477	-0.891

Table D11: MCAS 2008 Mathematics, Grade 6

Item	Type	A	B	C	D1	D2	D3	D4
251364	MC	0.912	-1.797	0.178				
251265	MC	1.178	-0.674	0.312				
251404	MC	1.278	-0.502	0.258				
251297	MC	0.983	-1.178	0.053				
229848	MC	1.073	-0.660	0.181				
251268	MC	1.171	-0.359	0.385				
251559	MC	0.924	-0.447	0.105				
251384	MC	1.393	0.201	0.171				
251474	MC	0.848	0.742	0.219				
251390	MC	1.373	-0.611	0.249				
217523	MC	0.915	-0.771	0.205				
251420	MC	1.001	0.119	0.308				
251363	MC	1.066	-1.487	0.063				
251336	MC	0.950	-1.242	0.123				
251338	MC	0.713	-1.116	0.094				
251267	MC	0.789	-0.661	0.340				
251284	MC	1.335	-0.089	0.269				
251486	MC	0.840	-0.301	0.299				
251414	MC	0.981	-1.215	0.206				
251304	MC	1.247	-0.185	0.270				
249057	MC	0.938	-0.165	0.293				
229861	MC	0.743	-0.550	0.196				
251307	MC	1.560	-0.023	0.151				
251484	MC	1.189	-0.265	0.202				
251472	MC	0.794	-0.601	0.213				
251386	MC	1.509	0.523	0.231				
251565	MC	0.978	-0.875	0.135				
251569	MC	1.197	0.169	0.167				
217509	MC	0.765	-1.215	0.201				
229047	SA	0.651	-1.088					
229758	SA	0.856	-1.582					
251427	SA	1.136	-0.173					
251344	SA	0.936	-0.248					
251343	SA	1.141	0.031					
251444	OR	1.094	-0.875		1.486	0.337	-0.226	-1.597
251354	OR	1.280	-0.111		1.019	0.232	-0.162	-1.089
251577	OR	1.025	-0.205		1.089	0.385	-0.062	-1.411
223452	OR	0.972	-0.652		1.079	0.119	-0.118	-1.080
251493	OR	1.196	0.368		1.242	0.141	-0.104	-1.279

Appendix D

Table D12: MCAS 2008 Mathematics, Grade 7

Item	Type	A	B	C	D1	D2	D3	D4
228024	MC	0.834	-1.179	0.223				
219442	MC	1.008	-1.394	0.168				
228016	MC	1.161	0.399	0.185				
273548	MC	0.991	0.060	0.163				
208424	MC	1.012	-0.145	0.301				
250426	MC	1.145	0.025	0.296				
219482	MC	0.939	-0.660	0.188				
219464	MC	1.076	0.937	0.179				
219517	MC	0.884	-0.849	0.233				
250500	MC	0.696	-1.469	0.067				
273549	MC	1.329	0.334	0.210				
219477	MC	1.463	-0.524	0.207				
219422	MC	0.619	-0.156	0.104				
219429	MC	0.899	0.117	0.244				
205231	MC	0.817	-0.157	0.204				
250865	MC	0.973	-1.129	0.385				
250340	MC	0.362	-2.706	0.000				
208352	MC	1.176	-0.104	0.113				
250528	MC	1.261	0.467	0.237				
250506	MC	0.899	-0.552	0.116				
228076	MC	0.938	0.544	0.372				
219470	MC	0.902	-0.786	0.196				
208585	MC	0.976	0.178	0.233				
250201	MC	0.984	0.410	0.210				
273550	MC	0.952	-0.808	0.099				
228029	MC	0.800	-1.056	0.274				
219450	MC	1.028	0.029	0.195				
198362	MC	1.137	0.565	0.280				
250854	MC	0.992	-0.465	0.198				
219533	SA	0.714	-0.124					
219526	SA	0.668	-1.410					
250265	SA	0.910	-0.786					
208768	SA	1.016	-0.632					
219431	SA	0.923	-0.811					
250215	OR	1.019	-0.938		1.990	0.307	-0.511	-1.786
274666	OR	1.308	-0.200		0.987	0.392	-0.111	-1.268
250361	OR	1.210	0.249		0.932	0.358	0.116	-1.405
250548	OR	1.195	-0.793		1.067	0.302	-0.293	-1.076
250278	OR	1.196	0.043		0.950	0.254	-0.252	-0.952

Table D13: MCAS 2008 Mathematics, Grade 8

Item	Type	A	B	C	D1	D2	D3	D4
228309	MC	1.132	-0.850	0.355				
253710	MC	0.842	0.326	0.521				
228630	MC	0.912	0.784	0.130				
253659	MC	0.658	-1.046	0.000				
228107	MC	0.889	-0.203	0.080				
253027	MC	1.423	0.264	0.200				
219558	MC	1.156	-0.313	0.213				
219574	MC	1.051	0.343	0.174				
253888	MC	0.867	0.537	0.159				
228353	MC	0.890	-0.084	0.513				
253694	MC	1.429	0.596	0.089				
253026	MC	1.299	0.155	0.205				
253016	MC	0.909	-0.132	0.192				
219595	MC	1.060	-0.329	0.229				
219565	MC	1.178	0.429	0.194				
219664	MC	0.787	-1.303	0.316				
253842	MC	0.957	-0.233	0.189				
253034	MC	1.188	0.473	0.159				
219596	MC	1.068	-0.848	0.241				
253746	MC	1.316	1.128	0.161				
253846	MC	0.560	-1.616	0.170				
253000	MC	0.643	-0.212	0.133				
259978	MC	1.420	0.496	0.091				
253819	MC	0.800	-0.931	0.203				
228508	MC	0.699	0.011	0.190				
253832	MC	1.257	0.323	0.361				
253796	MC	0.726	-1.198	0.098				
219580	MC	0.874	-0.753	0.088				
253822	MC	1.410	-0.138	0.126				
219708	SA	0.449	-1.799					
219692	SA	0.952	0.006					
229536	SA	1.055	0.672					
253763	SA	0.940	0.128					
228169	SA	0.906	-0.843					
253774	OR	1.192	0.060		2.070	-0.058	-0.509	-1.503
254052	OR	1.311	-0.122		1.472	0.114	-0.343	-1.242
253794	OR	0.788	-0.440		2.169	1.248	-1.305	-2.112
219724	OR	1.433	0.309		1.104	0.172	-0.533	-0.743
253882	OR	1.194	-0.239		1.283	0.339	-0.381	-1.241

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Table D14: MCAS 2008 Mathematics, Grade 10

Item	Type	A	B	C	D1	D2	D3	D4
250907	MC	0.852	-0.029	0.279				
254546	MC	1.174	0.109	0.147				
250896	MC	0.945	0.274	0.141				
261521	MC	0.904	0.603	0.124				
273058	MC	0.428	-0.299	0.210				
253151	MC	2.190		0.349				
273059	MC	1.406	0.602	0.238				
253160	MC	1.311	0.733	0.159				
273061	MC	1.351	0.520	0.124				
254620	MC	1.024	0.321	0.229				
253851	MC	1.048	0.758	0.327				
250911	MC	2.159	0.961	0.374				
254607	MC	1.302	0.518	0.218				
254292	MC	1.240	0.641	0.182				
253202	MC	0.856	0.058	0.114				
250983	MC	1.575	0.174	0.104				
253143	MC	1.001	0.395	0.191				
253188	MC	1.582	-0.336	0.229				
273056	MC	0.698	1.129	0.315				
229576	MC	1.413	0.507	0.121				
261482	MC	0.491	0.797	0.231				
253841	MC	1.447	0.736	0.180				
273062	MC	0.921	0.969	0.342				
253219	MC	0.361	0.027	0.000				
261490	MC	1.180	0.153	0.167				
273057	MC	1.959	0.932	0.264				
253181	MC	1.620	0.624	0.193				
227872	MC	1.166	0.807	0.305				
253264	MC	1.951	0.781	0.208				
227925	MC	0.863	0.717	0.205				
250619	MC	0.818	-0.553	0.299				
253189	MC	1.426	0.460	0.200				
254582	SA	1.155	0.243					
253231	SA	1.230	0.360					
229969	SA	0.715	0.341					
254135	SA	1.169	0.231					
254600	SA	1.754	0.876		0.752	0.275	-0.280	-0.747
258329	OR	1.541	0.796		0.772	0.318	-0.164	-0.927
254373	OR	1.553	0.508		0.870	0.477	-0.416	-0.931
261495	OR	1.466	-0.011		1.121	0.442	-0.046	-1.517
251149	OR	1.694	0.436		0.996	0.371	-0.351	-1.016
251661	OR	1.629	0.165		1.050	0.216	-0.354	-0.912

*Science and Technology/Engineering***Table D15: MCAS 2008 Science and Technology/Engineering, Grade 5**

Item	Type	A	B	C	D1	D2	D3	D4
264805	MC	0.789	-1.540	0.541				
273450	MC	0.512	-1.694	0.184				
272956	MC	0.716	-0.786	0.308				
268598	MC	0.729	-0.694	0.217				
264873	MC	0.801	-0.241	0.370				
264833	MC	1.202	-0.556	0.314				
264889	MC	0.725	-1.170	0.202				
264840	MC	0.718	-1.573	0.200				
264852	MC	0.939	-0.171	0.215				
264884	MC	0.761	-0.234	0.313				
264875	MC	0.931	0.135	0.250				
264896	MC	1.236	-0.076	0.204				
229228	MC	0.796	0.100	0.272				
264806	MC	0.556	-1.937	0.142				
264880	MC	0.885	0.683	0.073				
227823	MC	1.096	-0.139	0.167				
264876	MC	0.700	-1.623	0.474				
264860	MC	0.406	-2.888	0.000				
264897	MC	0.882	-0.507	0.358				
264879	MC	0.745	-1.877	0.240				
264796	MC	0.753	-0.410	0.270				
264804	MC	1.403	0.071	0.291				
229226	MC	0.551	0.334	0.210				
227838	MC	1.018	-1.386	0.234				
245532	MC	0.543	-0.090	0.196				
264862	MC	0.514	-1.664	0.250				
264863	MC	0.347	-0.314	0.466				
264878	MC	0.646	0.203	0.213				
245439	MC	0.582	-1.744	0.194				
264820	MC	0.762	-0.006	0.247				
264874	MC	0.701	-1.445	0.221				
264808	MC	0.860	-1.424	0.256				
228969	MC	0.663	-0.288	0.482				
264858	MC	1.031	-1.307	0.254				
264818	OR	0.805	-0.804		2.150	0.610	-0.691	-2.069
264813	OR	0.716	0.862		1.110	0.586	-0.312	-1.384
264801	OR	0.992	-0.881		1.485	0.458	-0.374	-1.569
264855	OR	0.628	0.155		1.711	0.793	-0.488	-2.016
245523	OR	0.777	-0.998		1.848	0.741	-0.585	-2.004

Appendix D

Table D16: MCAS 2008 Science and Technology/Engineering, Grade 8

Item	Type	A	B	C	D1	D2	D3	D4
246381	MC	0.859	0.016	-1.430				
227993	MC	0.686	0.013	-1.779				
265264	MC	0.352	0.007	-3.668				
273677	MC	1.215	0.017	-0.197				
265227	MC	1.005	0.015	-0.284				
246371	MC	0.769	0.027	1.548				
265272	MC	0.981	0.014	-0.318				
246285	MC	1.191	0.019	0.103				
265255	MC	0.649	0.014	0.019				
229391	MC	1.094	0.028	0.902				
246353	MC	0.297	0.005	-1.144				
274908	MC	0.369	0.006	-2.084				
265233	MC	1.674	0.034	1.101				
229379	MC	0.784	0.016	0.366				
227985	MC	1.038	0.014	0.006				
265250	MC	0.995	0.016	0.300				
229434	MC	1.098	0.018	0.409				
265277	MC	1.124	0.018	-1.309				
229402	MC	1.181	0.025	0.957				
265289	MC	1.428	0.023	0.558				
227899	MC	1.045	0.015	-0.086				
265240	MC	1.055	0.022	-0.147				
274912	MC	0.544	0.014	-0.997				
265246	MC	0.882	0.015	-0.335				
246309	MC	0.949	0.018	-1.672				
265270	MC	0.922	0.016	0.074				
226410	MC	0.744	0.013	-0.263				
265224	MC	1.170	0.028	1.371				
265291	MC	1.347	0.018	0.085				
265220	MC	0.662	0.014	-0.304				
227935	MC	0.918	0.014	0.093				
246341	MC	1.043	0.017	0.191				
246358	MC	1.009	0.024	1.456				
274913	MC	0.898	0.016	-0.008				
265297	OR	0.953	-0.234		1.412	0.537	-0.288	-1.661
246367	OR	1.103	0.013		0.616	0.259	-0.124	-0.750
246272	OR	1.072	0.555		1.783	0.577	-0.654	-1.706
246355	OR	0.928	0.234		1.106	0.210	-0.245	-1.071
265222	OR	1.197	-0.172		1.607	0.395	-0.501	-1.501

Table D17: MCAS 2008 Biology, High School

Item	Type	A	B	C	D1	D2	D3	D4
208047	MC	0.849	-1.513	0.149				
208212	MC	1.098	-0.337	0.097				
235171	MC	1.822	0.735	0.268				
256956	MC	1.340	0.719	0.120				
208109	MC	0.800	-0.017	0.269				
243342	MC	0.589	0.489	0.236				
249209	MC	1.658	-0.606	0.254				
255022	MC	1.480	0.228	0.265				
219812	MC	0.786	0.606	0.178				
219808	MC	1.339	0.001	0.266				
219809	MC	0.896	0.623	0.210				
209031	MC	0.896	-0.253	0.365				
243379	MC	0.654	0.621	0.285				
209062	MC	1.000	-0.772	0.168				
208231	MC	0.919	-0.403	0.171				
256925	MC	1.013	0.445	0.276				
222215	MC	0.578	-0.724	0.258				
243557	MC	0.644	-0.387	0.193				
222370	MC	1.050	-0.812	0.067				
243574	MC	0.716	0.153	0.181				
234731	MC	1.112	-1.086	0.260				
213725	MC	0.589	-1.054	0.113				
242859	MC	0.813	0.600	0.300				
208135	MC	1.050	-1.094	0.248				
243545	MC	1.339	0.954	0.237				
256959	MC	1.094	-0.668	0.324				
251046	MC	1.028	-0.589	0.186				
251048	MC	1.260	-0.147	0.187				
256935	MC	0.328	0.024	0.210				
230208	MC	1.488	0.369	0.173				
208149	MC	0.636	-0.456	0.240				
208106	MC	0.925	-0.238	0.152				
208169	MC	0.469	0.405	0.208				
234785	MC	0.819	-0.937	0.391				
209060	MC	1.101	0.404	0.121				
234781	MC	1.138	0.067	0.181				
243443	MC	0.866	-0.580	0.221				
251003	MC	1.071	-0.369	0.222				
208163	MC	0.727	0.356	0.104				
243566	MC	1.093	-1.104	0.263				
219817	OR	1.086	1.041		1.433	0.287	-0.486	-1.234
230316	OR	1.117	-0.353		1.156	0.571	-0.538	-1.190
234767	OR	1.314	-0.048		0.955	0.304	-0.433	-0.826
222192	OR	1.531	0.228		1.331	0.549	-0.512	-1.368
221904	OR	1.129	-0.097		1.265	0.579	-0.348	-1.495

Appendix D

Table D18: MCAS 2008 Chemistry, High School

Item	Type	A	B	C	D1	D2	D3	D4
208219	MC	1.064	-0.326	0.237				
246807	MC	1.977	1.047	0.237				
258927	MC	0.971	0.645	0.287				
229781	MC	0.837	0.239	0.221				
252660	MC	2.242	0.846	0.319				
244760	MC	1.542	0.566	0.273				
244986	MC	0.915	0.616	0.215				
246705	MC	1.161	-0.849	0.230				
258944	MC	1.121	0.095	0.335				
246791	MC	2.055	0.413	0.279				
252576	MC	1.037	0.278	0.252				
206657	MC	1.028	0.045	0.103				
252649	MC	1.195	0.866	0.226				
252679	MC	1.221	0.782	0.267				
246833	MC	0.868	0.676	0.277				
244807	MC	1.014	-1.559	0.186				
229260	MC	0.615	-1.136	0.132				
229237	MC	1.562	0.434	0.217				
260028	MC	0.590	-0.179	0.183				
244979	MC	1.296	0.861	0.258				
229547	MC	1.587	0.912	0.156				
206742	MC	1.711	0.336	0.167				
208315	MC	0.947	-0.633	0.307				
246710	MC	1.100	1.235	0.298				
208221	MC	1.099	-0.275	0.241				
246849	MC	1.010	0.807	0.144				
208262	MC	1.914	0.249	0.301				
229583	MC	1.233	0.678	0.237				
229501	MC	0.695	-0.386	0.242				
216944	MC	1.127	0.126	0.248				
206660	MC	1.600	0.637	0.242				
246789	MC	1.722	0.516	0.282				
252569	MC	0.817	0.337	0.334				
258931	MC	0.719	0.680	0.400				
229497	MC	0.962	0.059	0.269				
208222	MC	1.044	-0.761	0.239				
246842	MC	0.875	0.545	0.227				
246817	MC	1.424	1.020	0.115				
206730	MC	0.554	-0.268	0.136				
246834	MC	0.650	1.033	0.264				
206758	OR	1.204	0.737		0.680	0.229	-0.177	-0.731
268486	OR	0.970	0.338		1.129	0.432	-0.404	-1.157
253953	OR	1.134	0.602		1.876	0.370	-0.566	-1.680
252636	OR	1.048	0.799		1.464	0.496	-0.316	-1.644
252633	OR	1.491	0.389		0.896	0.185	-0.178	-0.903

Table D19: MCAS 2008 Introductory Physics, High School

Item	Type	A	B	C	D1	D2	D3	D4
252043	MC	0.873	-0.467	0.354				
246985	MC	0.781	-0.622	0.312				
241702	MC	0.879	-0.116	0.258				
246870	MC	1.554	0.763	0.344				
210938	MC	1.401	0.865	0.482				
258342	MC	0.531	0.544	0.198				
241706	MC	0.700	-0.116	0.226				
206577	MC	1.190	-0.624	0.369				
258349	MC	1.264	1.249	0.197				
230379	MC	1.803	0.366	0.231				
258353	MC	1.311	1.917	0.152				
247023	MC	1.449	0.294	0.227				
246988	MC	0.778	-0.265	0.209				
258345	MC	1.078	0.179	0.274				
208335	MC	1.127	-0.642	0.212				
226031	MC	1.689	0.400	0.274				
226114	MC	1.254	1.029	0.157				
241697	MC	1.141	0.734	0.173				
226037	MC	1.670	0.304	0.301				
226710	MC	1.372	-0.175	0.213				
208333	MC	0.974	0.678	0.185				
251743	MC	0.672	-1.026	0.209				
246865	MC	1.440	1.167	0.181				
226047	MC	1.670	-0.036	0.327				
226116	MC	0.667	-0.336	0.249				
206589	MC	1.036	0.644	0.246				
208334	MC	0.667	-0.314	0.125				
230730	MC	1.309	-0.458	0.183				
226867	MC	1.357	-0.504	0.247				
246968	MC	0.937	-0.264	0.322				
208532	MC	1.574	1.350	0.349				
206584	MC	1.219	0.380	0.245				
246889	MC	1.181	0.485	0.265				
207984	MC	0.863	1.290	0.170				
208344	MC	1.076	-0.381	0.224				
246978	MC	1.051	0.731	0.192				
208444	MC	1.073	1.387	0.220				
235454	MC	1.126	1.011	0.319				
246881	MC	1.020	1.279	0.151				
251781	MC	0.825	-1.300	0.172				
226050	OR	0.927	-0.160		1.594	0.877	-0.506	-1.964
247003	OR	0.968	0.371		1.395	0.520	-0.362	-1.553
208408	OR	1.280	0.454		1.320	0.526	-0.522	-1.324
247102	OR	1.101	-0.297		1.024	0.220	-0.309	-0.934
258363	OR	1.134	-0.070		1.086	0.453	-0.495	-1.044

Appendix D

Table D20: MCAS 2008 Technology/Engineering, High School

Item	Type	A	B	C	D1	D2	D3	D4
251725	MC	1.000	-0.959	0.000				
221782	MC	1.000	-0.871	0.000				
230923	MC	1.000	0.194	0.000				
221680	MC	1.000	-0.964	0.000				
221572	MC	1.000	-0.203	0.000				
208452	MC	1.000	0.491	0.000				
246660	MC	1.000	-1.012	0.000				
246627	MC	1.000	-0.143	0.000				
260807	MC	1.000	-0.355	0.000				
221549	MC	1.000	-0.027	0.000				
252772	MC	1.000	-0.523	0.000				
260847	MC	1.000	0.156	0.000				
248608	MC	1.000	-0.458	0.000				
246642	MC	1.000	-1.468	0.000				
221728	MC	1.000	-0.051	0.000				
221790	MC	1.000	0.080	0.000				
208960	MC	1.000	-0.356	0.000				
208965	MC	1.000	-0.521	0.000				
260813	MC	1.000	-0.061	0.000				
248664	MC	1.000	-0.036	0.000				
230944	MC	1.000	-0.980	0.000				
246646	MC	1.000	-1.287	0.000				
240029	MC	1.000	-0.454	0.000				
230927	MC	1.000	-0.234	0.000				
260816	MC	1.000	0.350	0.000				
246662	MC	1.000	-0.208	0.000				
221717	MC	1.000	-0.770	0.000				
230767	MC	1.000	-0.195	0.000				
264189	MC	1.000	-0.545	0.000				
208140	MC	1.000	0.088	0.000				
222086	MC	1.000	0.024	0.000				
221668	MC	1.000	0.079	0.000				
222033	MC	1.000	0.053	0.000				
260815	MC	1.000	0.292	0.000				
248620	MC	1.000	-0.453	0.000				
260838	MC	1.000	-0.348	0.000				
261739	MC	1.000	-0.143	0.000				
221991	MC	1.000	-0.339	0.000				
206605	MC	1.000	-0.563	0.000				
246639	MC	1.000	0.151	0.000				
208983	OR	1.000	-0.533		0.800	0.298	-0.046	-1.053
248694	OR	1.000	0.336		1.225	0.368	-0.496	-1.097
215976	OR	1.000	-0.129		0.978	0.500	-0.441	-1.037
252775	OR	1.000	0.195		1.087	0.772	-0.106	-1.753
251730	OR	1.000	-0.158		1.341	0.315	-0.485	-1.171